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EDITORIALS

Are prolific authors too much of a good thing?

Dominant authors can lead to an imbalance of power within an evidence base

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According to a linked article by Holleman and colleagues,[1] diabetes research is dominated by a few dozen prolific researchers, a handful so productive that they were designated "supertrialists." Holleman and colleagues examined randomised controlled trials of glucose lowering drugs published in the 20 years up to 2013, and found that roughly a third (32.4%) of reports were published by less than 1% (110 of 13 592) of authors. The most prolific individuals were named on seven trial reports, on average, every year for the last 10 years. Holleman and colleagues' study did not determine how many separate trials were reported by these articles, but even assuming that large trials generate several publications, they found that some authors had an extraordinary output. In a similar study of prolific authors,[2] the 10 most productive in each of four medical specialties were named on at least one publication per 10 working days each year, showing that the issue is not restricted to diabetes research.

Making a meaningful contribution to both the research and publication processes, as required by authorship criteria from the International Committee of Medical Journal Editors (ICMJE),[3] involves a serious investment of time. Is it possible to fulfil a strict interpretation of the ICMJE authorship criteria and report findings from a trial every other month? This might be possible for certain contributions that are not particularly time consuming but are intellectually critical to the research and therefore deserving of authorship, for example, providing statistical expertise for a study design and analysis plan. Holleman and colleagues did not investigate the precise contribution of authors, but this would be an interesting area for further study. Furthermore, interpretation of the ICMJE criteria varies. Indeed, we already know that some researchers consider the criteria overly stringent or even unethical.[4]

Why should we worry about how authorship guidelines are interpreted and applied? As the Council of Sciences Editors' Taskforce noted in 2000, "a healthy biomedical research ecosystem absolutely requires a healthy system of authorship."[5] The ICMJE criteria were introduced in an attempt to achieve and maintain such a system, and disagreements about how they are interpreted undermine authorship. This has implications for who takes credit and responsibility for research findings.[6] Inconsistent application of authorship guidelines could mislead readers about who actually did the work and can obscure the role of organisations, institutions, and employers (for example, if drug company employees are omitted).

Holleman and colleagues' study highlights the potential for distortion in the evidence base for diabetes drugs. Having 0.8% of authors responsible for one in three articles describing randomised controlled trials—and therefore providing the main evidence on a class of drugs—suggests a serious imbalance of power. More than four fifths of the most prolific authors came from just four countries, and 91% of their publications were sponsored by commercial companies. Therefore, the needs of patients outside those countries may be under-represented, along with the views of independent researchers without commercial interests.

One possible reason for the dominance of commercial research is that investigators working with pharmaceutical companies receive more technical and financial support in developing publications than independent researchers. The involvement of properly acknowledged professional medical writers is not, in itself, a bad thing. In fact, a recent study showed that support from professional writers could improve the reporting of trials.[7] However, a lack of support—owing to lack of resources, lack of awareness of the benefits of involving professional medical writers, or academic prejudice against seeking such assistance—could create a form of publication bias. With greater support and therefore greater productivity, the views of industry funded trialists will have a larger share of voice than those of independent clinicians and researchers.

The dominance of a minority of prolific authors might also be exacerbated by pharmaceutical companies' traditional cultivation of "key opinion leaders." Critics of this practice have suggested that key opinion leaders can become "experts acting as the marketing arm of the drug industry" and that they help companies "take control of . . . reporting investigations."[8] However, Holleman and colleagues did not explore the relationships of prolific authors with the pharmaceutical or medical device industry, and furthermore, the cultivation of opinion leaders by industry may be decreasing. For example, GlaxoSmithKline has announced it will stop paying doctors to speak on its behalf,[9] and many companies now follow good publication practice,[10] which forbids payment for guest

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authorship. Still, the phenomenon of prolific authorship clearly persists and deserves further investigation.

Academia also needs to consider its role in this phenomenon. Research institutions should ask whether their culture encourages academics to seek publication above all else by judging them on research output rather than, for example, teaching, peer review, or leadership. It is still common to see announcements from universities boasting that newly appointed academics have authored many hundreds of publications. Inflexible and narrowly focused academic reward systems in many countries, which seem to value the quantity over the quality of a researcher's publications, may be as much a part of the problem as the pharmaceutical industry.

We need a change of institutional culture so that, instead of being rewarded, unfeasibly lengthy CVs are discouraged. This could be done by shifting the focus of reward from crude measures of quantity to a deeper consideration of research quality and impact.[11] We should also consider a radical overhaul of authorship guidelines (and rewards) to produce a new system that reflects current research practices, is regarded as equitable by all parties, trusted by the public, and uniformly interpreted and implemented.

Competing interests: I have read and understood BMJ policy on declaration of interests and declare that I provide consultancy and training on medical writing to universities, academic societies, publishers, and pharmaceutical companies. I used to work as a medical writer for pharmaceutical companies.

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